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EXAMINER

MEUCCI, MICHAEL D

ART UNIT PAPER NUMBER

2142

DATE MAILED: 10/06/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 09/852,200	<b>Applicant(s)</b> BECKWITH ET AL.	
	<b>Examiner</b> Michael D Meucci	<b>Art Unit</b> 2142	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 08 May 2001.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-40 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-40 is/are rejected.
- 7) ☒ Claim(s) 1-18 and 38-40 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08 May 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☒ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Oath/Declaration***

1. The oath or declaration is defective. A new oath or declaration in compliance with 37 CFR 1.67(a) identifying this application by application number and filing date is required. See MPEP §§ 602.01 and 602.02.

The oath or declaration is defective because:

a. It does not identify the citizenship of each inventor. Citizenship of Mary Albanese is not provided on the Oath/Declaration as required.

### ***Claim Objections***

2. Claim 13 recites the limitation "said predetermined ordered queue of client processes" in lines 3-4 of the claim. Examiner believes applicant meant to specify: "said predetermined ordered queue of said client processes" as specified in claim 11. Correction is required.

3. Claims 1-18 objected to for minor informalities. Claim 1 recites the limitations: "server process software application," "client process software application," and "control process software module." The majority of claims 2-18 refer to each respectively as: "server process," "client process," and "control process." Applicant is remind that they must remain consistent with terminology throughout or the terms will lack antecedent basis in the claims. Correction is required for all instances.

4. Claim 38 objected to because it appears that applicant meant to separate the claim into two different claims. It is believe by the examiner that claim 38 was meant to end with the limitation "...upon the occurrence of said predetermined message to

simulate,” and claim 39 was meant to begin with “A simulator apparatus comprising...” and end with “...performing a repeatable simulation.” This is how claims 38 and 39 will be treated on the merits for the purpose of applying art. Applicant is to correct the claims as appropriate.

5. Claim 40 objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Claim 40 is dependent upon claim 39, which does not exist in this application. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form.

***Claim Rejections - 35 USC § 112***

6. Claims 2-9 and 11-16 recite the limitation “server process.” Claim 10 recites the limitation “server.” Claim 17 recites the limitation “server application.” Claim 18 recites the limitation “server process application.” All lack antecedent basis in the claims because claim 1 recites the limitation “server process software application.” Similar problems exist with the terms “client process,” “control process” and other variations of these. Applicant is remind that they must remain consistent with terminology throughout or the terms will lack antecedent basis in the claims. Correction is required for all instances.

7. Claim 13 recites the limitation “said sorted even expression messages” in line 2 of the claim. There is insufficient antecedent basis for this limitation in the claim.

8. Claim 39 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant

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regards as the invention. It is unclear to the examiner what is meant by "means for sending and receiving messages server means and said client means..." For the purpose of applying art, it will be presumed that the applicant meant to disclose: "means for sending and receiving messages to and from said server means and said client means..." Appropriate correction is required.

9. Claim 40 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 40 is dependent upon claim 39, which does not exist in this application. Correction is required.

***Claim Rejections - 35 USC § 102***

10. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

11. Claims 1-7 rejected under 35 U.S.C. 102(e) as being anticipated by Kuo et al. (U.S. 6,330,582 B1) hereinafter referred to as Kuo.

a. As per claim 1, Kuo teaches: at least one server process software application... (abstract); at least one client process software application... (abstract); and a control process software module... (abstract, lines 20-35 of column 2, and lines 49-52 of column 3).

b. As per claim 2, Kuo teaches: server process and client process send and receive messages only to and from control process... (abstract and lines 20-35 of column 2).

c. As per claim 3, Kuo teaches: control process controls the running... (abstract); and control process sets synchronization points... (lines 53-58 of column 4).

d. As per claim 4, Kuo teaches: a plurality of server processes... (abstract); wherein said control process... (lines 33-44 of column 2, lines 53-58 of column 4, lines 38-40 of column 7, and Table IV in column 9).

e. As per claim 5, Kuo teaches: a plurality of client processes associated with said server process... (abstract).

f. As per claim 6, Kuo teaches: a plurality of server processes... (abstract);

g. As per claim 7, Kuo teaches: said control process sets up a server order queue... (lines 33-35 of column 2 and lines 35-42 of column 3).

12. Claims 19-21, 23-25, 29-30, and 38 rejected under 35 U.S.C. 102(e) as being anticipated by Schwaller et al. (U.S. 6,408,335 B1) hereinafter referred to as Schwaller.

a. As per claim 19, Schwaller teaches: a computer, servers, and clients comprising a processor and primary memory (inherent), secondary memory (lines 48-53 of column 11), means for I/O (lines 9-12 of column 3); a control process software module... (lines 34-65 of column 28, lines 27-60 of column 29, and line 62 of column 33 through line 28 of column 34).

b. As per claim 20, Schwaller teaches: simulated device selected from the group consisting... (abstract and lines 29-55 of column 1).

- c. As per claim 21, Schwaller teaches: control process software module controls... (line 1 of column 5 through line 14 of column 6).
- d. As per claim 23, Schwaller teaches: said control process stops... (lines 36-45 of column 5).
- e. As per claim 24, Schwaller teaches: a plurality of client applications (line 29 of column 1 through line 21 of column 3, and Fig. 1, 3, and 4).
- f. As per claim 25, Schwaller teaches: a plurality of server applications, said plurality of server applications... (line 29 of column 1 through line 21 of column 3, and Fig. 1, 3, and 4).
- g. As per claim 29, Schwaller teaches: running a plurality of server process software applications that simulate a server application (abstract and lines 30-55 of column 1); running a plurality of client process software applications that each simulate a client application, each of said client applications associated with at least one of said server applications (abstract and lines 30-55 of column 1); running a protocol process software application that acts as a message broker... (lines 34-65 of column 28, lines 27-60 of column 29, and line 62 of column 33 through line 28 of column 34); and maintaining the elapsed time of said simulation in said control process software application (lines 1-35 of column 5).
- h. As per claim 30, Schwaller teaches: determining the occurrence of a predetermined event... (lines 34-65 of column 28, lines 27-60 of column 29, line 16 of column 27 through line 33 of column 28, and line 62 of column 33 through line 28 of column 34).

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i. As per claim 38, Schwaller teaches: polling each of said... (line 35 of column 3 through line 59 of column 5).

j. As per claim 39, Schwaller teaches: means... acting as a server/client (lines 29-55 of column 1); means for sending and receiving messages "to and from said" server means and said client means... (lines 34-65 of column 28, lines 27-60 of column 29, and line 62 of column 33 through line 28 of column 34); said server means, said client means and said message broker means act as a simulator performing a repeatable simulation (lines 49-56 of column 4).

***Claim Rejections - 35 USC § 103***

13. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

14. Claims 8-11 rejected under 35 U.S.C. 103(a) as being unpatentable over Kuo as applied to claim 3, in view of Baker et al. (U.S. 6,611,498 B1) hereinafter referred to as Baker.

a. As per claim 8, Kuo teaches: said server process evaluates... (lines 24-42 of column 3); and at least one said server process... (lines 24-42 of column 3).

Kuo fails to teach: said event expression message containing a time stamp... However, Baker discloses: "A client session's time stamp is updated each time a message transaction containing the session id for the session is received," (lines 13-15 of column 17).



It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to have the event expression message contain a time stamp. "If the time stamp value shows that a session has aged, the session entry for the aged session is cleared from the session table 660," (lines 23-35 of column 17 in Baker). It is for this reason that one of ordinary skill in the art at the time of the applicant's invention would have been motivated to have the event expression message contain a time stamp in the system as taught by Kuo.

b. As per claim 9, Kuo teaches: a plurality of server processes... (abstract).

c. As per claim 10, Kuo fails to teach: control process maintains said time stamp... However, Baker discloses: "A client session's time stamp is updated each time a message transaction containing the session id for the session is received," (lines 13-15 of column 17).

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to have the event expression message contain a time stamp. "If the time stamp value shows that a session has aged, the session entry for the aged session is cleared from the session table 660," (lines 23-35 of column 17 in Baker). It is for this reason that one of ordinary skill in the art at the time of the applicant's invention would have been motivated to have the event expression message contain a time stamp in the system as taught by Kuo.

d. As per claim 11, Kuo teaches: said control process sets up a server order queue... (lines 33-35 of column 2 and lines 35-42 of column 3).

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15. Claims 12-13 rejected under 35 U.S.C. 103(a) as being unpatentable over Kuo in view of Baker as applied to claim 11, further in view of Willmann et al. (U.S. 5,521,923) hereinafter referred to as Willmann.

As per claims 12 and 13, Kuo teaches: said control process receives a plurality of said event expression messages... (lines 33-35 of column 2 and lines 35-42 of column 3).

Kuo fails to teach: said control process ordering each of said event expression messages... and said control process delivers said sorted event expression messages... However, Willmann discloses: "Each of these data packets is provided with a time stamp TS, which gives information on the order of arrival of the data packets. The queues QU1 and QU2 are organized as FIFO queues (FIFO=first-in-first-out)," (lines 16-19 of column 4).

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to have said control process ordering each of said event expression messages... and said control process delivers said sorted event expression messages... FIFO queue usage with timestamps is very well known in the art at the time of the applicant's invention. It is for this reason that one of ordinary skill in the art at the time of the applicant's invention would have been motivated to have the control process ordering each of said even expression messages within said server order queue according to the earliest time of said time stamp at which said even occurred in said sever process and to have said control process delivers said sorted event expression messages to said client processes associated with said server processes

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according to said predetermined ordered queue of client processes in the system as taught by Kuo and Baker.

16. Claims 14-15 rejected under 35 U.S.C. 103(a) as being unpatentable over Kuo as applied to claim 5, in view of Wegrzyn (U.S. 5,729,540).

Kuo fails to teach: each client process sends a finish message; control process holds said finish messages; and control process sends a finish message... However, Wegrzyn discloses: "messages are scheduled using a temporary data structure--namely the combined messages/scheduling data block 68. The combined messages/scheduling data block 68 temporarily holds messages until the end of each scheduler processing cycle," (line 66 of column 14 through line 3 of column 15).

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to have each client process sends a finish message; control process holds said finish messages; and control process sends a finish message... "The combined messages/scheduling data block 68 temporarily holds messages until the end of each scheduler processing cycle when the messages are ready to be formatted by frame formatter 70," (lines 1-5 of column 15 in Wegrzyn). It is for this reason that one of ordinary skill in the art at the time of the applicant's invention would have been motivated to have each client process sends a finish message; control process holds said finish messages; and control process sends a finish message in the system as taught by Kuo.

17. Claims 16-18 rejected under 35 U.S.C. 103(a) as being unpatentable over Kuo as applied to claim 2, in view of Baker.

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a. As per claim 16, Kuo teaches: a plurality of client processes... (abstract); a plurality of client processes, each of said server processes evaluates... (lines 24-42 of column 3).

Kuo fails to teach: said event expression message containing a time stamp... However, Baker discloses: "A client session's time stamp is updated each time a message transaction containing the session id for the session is received," (lines 13-15 of column 17).

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to have the event expression message contain a time stamp. "If the time stamp value shows that a session has aged, the session entry for the aged session is cleared from the session table 660," (lines 23-35 of column 17 in Baker). It is for this reason that one of ordinary skill in the art at the time of the applicant's invention would have been motivated to have the event expression message contain a time stamp in the system as taught by Kuo.

b. As per claim 17, Kuo teaches: said control process software module sets up a plurality of predetermined ordered queues... (lines 33-35 of column 2 and lines 35-42 of column 3).

c. As per claim 18, Kuo teaches: said control process software module resides within... (line 66 of column 1 through line 17 of column 2).

18. Claim 22 rejected under 35 U.S.C. 103(a) as being unpatentable over Schwaller as applied to claim 21, in view of Gee (U.S. 6,178,395 B1).

Schwaller fails to teach: control process software module comprises a synchronization varying software module for varying the elapsed time duration between said synchronization points. However, Gee discloses: "Either the start time of the response or the duration of the response may then iteratively be modified to cause the response to eventually overlap the hit window, thereby generating a correct response cue," (abstract).

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to have the control process software module comprise a synchronization varying software module for varying the elapsed time duration between said synchronization points. "Before calibration process 300 begins, the diagnostic/training software (such as OMDFF) may be initialized along with the data acquisition processor 106 of FIG. 2 to synchronize the progression of presenting the stimulus by the software and the mouse down signal durations generated by data acquisition computer/processor 104," (lines 55-61 of column 7 in Gee). It is for this reason that one of ordinary skill at the time of the applicant's invention would have been motivated to have the control process software module comprise a synchronization varying software module for varying the elapsed time duration between said synchronization points in the system as taught by Schwaller.

19. Claim 26 rejected under 35 U.S.C. 103(a) as being unpatentable over Schwaller as applied to claim 25, in view of Iwasawa et al. (U.S. 5,361,352) hereinafter referred to as Iwasawa and Alferness et al. (U.S. 5,602,998) hereinafter referred to as Alferness.

Schwaller fails to teach: said control process software module sets up a plurality of predetermined ordered queues comprising a client ordered queue of client applications and a server ordered queue of server applications.

However, Iwasawa discloses: "a method for controlling a debugging process includes the steps of registering identifiers of plural processors into an execution waiting queue in a predetermined order;" (abstract).

Alferness discloses: "The system architecture, known as the 'Queuing Architecture,' uses queues as a mechanism for message passing and process synchronization," lines 48-50 of column 1).

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to have said control process software module set up a plurality of predetermined ordered queues comprising a client ordered queue of client applications and a server ordered queue of server applications. "executing a corresponding program by each of the processors in an order until it is brought into either a waiting state or an end state; registering the identifier of the processor of the waiting state as a last element of the execution waiting queue; and repeating the executing step until there are no executable processors," (abstract of Iwasawa). "A queue bank may be a queue header or a queue entry. A queue is made up of one queue header and zero or more queue entries. The queue header holds control information for the queue. Queue entries hold the message data being passed between processes. To pass a message from one process to another process in the Queuing Architecture, the sending process inserts the message data into a queue entry and then enqueues it to a queue. The receiving

process, which may be waiting on entries being placed on the queue, dequeues the queue entry and processes the message data," (line 65 of column 1 through line 7 of column 2 in Alferness).

It is for these reasons that one of ordinary skill in the art at the time of the applicant's invention would have been motivated to have said control process software module set up a plurality of predetermined ordered queues comprising a client ordered queue of client applications and a server ordered queue of server applications in the system as taught by Schwaller.

20. Claim 27 rejected under 35 U.S.C. 103(a) as being unpatentable over Schwaller as applied to claim 21, in view of Baker.

Schwaller teaches: a plurality of server applications, a plurality of client applications... (line 29 of column 1 through line 21 of column 3, and Fig. 1, 3, and 4); each of said sever applications evaluates and event expression... (line 16 of column 27 through line 33 of column 28).

Schwaller fails to teach: a timestamp indicating the time at which said even occurred in said server process. However, Baker discloses: "A client session's time stamp is updated each time a message transaction containing the session id for the session is received," (lines 13-15 of column 17).

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention a timestamp indicating the time at which said even occurred in said server process. "If the time stamp value shows that a session has aged, the session entry for the aged session is cleared from the session table 660," (lines 23-35 of column

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17 in Baker). It is for this reason that one of ordinary skill in the art at the time of the applicant's invention would have been motivated to have a timestamp indicating the time at which said even occurred in said server process in the system as taught by Schwaller.

21. Claim 28 rejected under 35 U.S.C. 103(a) as being unpatentable over Schwaller in view of Baker as applied to claim 27, further in view of Kuo and Willmann.

Schwaller fails to teach: said control process software module sets up a plurality... However, Kuo discloses: "The invention provides a mechanism that can be manipulated as an object by a client process to control bi-directional transaction message traffic between the client process and a server process. The invention allows a client process to name the mechanism as an object at a server process. The named object (also referred to as a 'Tpipe') includes the ability to receive transaction request messages and transaction output messages at the server process and to associate transaction output messages with their ultimate destinations. Thus, the association between transaction output and its recipient is not made by a server process but is, rather, left to the client process.

The invention is embodied in both a mechanism and a procedure for bi-directional transport of transaction messages between server and client processes.

The invention affords flexibility to a transaction processing system of the client/server model in that many transaction outputs may simultaneously flow through the same Tpipe.



The invention allows a client process to create more than one Tpipe, thereby allowing distinctions to be made between transactions that occur naturally because of, for example, flow-control and synchronization differences.

The invention relieves the server process of responsibility for coupling a transaction output to an end user.

The invention provides client processes with control over the output of their submitted transactions," (lines 21-48 of column 2); and "Transaction requests are passed to the transaction manager 31 through an input queue 35. The transaction manager evaluates a transaction request, dispatches a transaction process to execute the request via one of the applications 33, 34. Output for transaction requests is queued at 36 and passed through the communications interface 25 and the communications facility 16 to the respective requesting client processes," (lines 35-42 of column 3)

Willmann discloses: "Each of these data packets is provided with a time stamp TS, which gives information on the order of arrival of the data packets. The queues QU1 and QU2 are organized as FIFO queues (FIFO=first-in-first-out)," (lines 16-19 of column 4).

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to have the said control process software module set up a plurality... "Each transaction message control mechanism includes a named processing object that includes a name identifying the object. The named processing object also includes an input process that receives all transaction request messages

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naming the object and identifying the originating client process. The input process dispatches a transaction process for each transaction request message received from the respective client process. Each transaction process oversees transaction execution and receives transaction output. A transaction process provides a transaction output message for the originating client process. In a non-sync'd mode of operation, transaction processes may synchronously send transaction output messages to client processes. In a synchronized mode of operation, one transaction process at a time sends output messages under control of an output process in the named processing object. The transaction message control mechanisms provide a bi-directional transaction message flow between server and client processes," (abstract of Kuo).

FIFO queue usage with timestamps is very well known in the art at the time of the applicant's invention.

It is for these reasons that one of ordinary skill in the art at the time of the applicant's invention would have been motivated to have the said control process software module set up a plurality... in the system as taught by Schwaller and Baker.

22. Claims 31-32 rejected under 35 U.S.C. 103(a) as being unpatentable over Schwaller as applied to claim 30, in view of Kuo and Willmann.

Schwaller fails to teach: ordering, in said control process... and delivering said messages... However, Kuo discloses: "The invention provides a mechanism that can be manipulated as an object by a client process to control bi-directional transaction message traffic between the client process and a server process. The invention allows a client process to name the mechanism as an object at a server process. The named

object (also referred to as a 'Tpipe') includes the ability to receive transaction request messages and transaction output messages at the server process and to associate transaction output messages with their ultimate destinations. Thus, the association between transaction output and its recipient is not made by a server process but is, rather, left to the client process.

The invention is embodied in both a mechanism and a procedure for bi-directional transport of transaction messages between server and client processes.

The invention affords flexibility to a transaction processing system of the client/server model in that many transaction outputs may simultaneously flow through the same Tpipe.

The invention allows a client process to create more than one Tpipe, thereby allowing distinctions to be made between transactions that occur naturally because of, for example, flow-control and synchronization differences.

The invention relieves the server process of responsibility for coupling a transaction output to an end user.

The invention provides client processes with control over the output of their submitted transactions," (lines 21-48 of column 2); and "Transaction requests are passed to the transaction manager 31 through an input queue 35. The transaction manager evaluates a transaction request, dispatches a transaction process to execute the request via one of the applications 33, 34. Output for transaction requests is queued at 36 and passed through the communications interface 25 and the

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communications facility 16 to the respective requesting client processes,” (lines 35-42 of column 3)

Willmann discloses: “Each of these data packets is provided with a time stamp TS, which gives information on the order of arrival of the data packets. The queues QU1 and QU2 are organized as FIFO queues (FIFO=first-in-first-out),” (lines 16-19 of column 4).

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to order, in said control process... and deliver said messages... “Each transaction message control mechanism includes a named processing object that includes a name identifying the object. The named processing object also includes an input process that receives all transaction request messages naming the object and identifying the originating client process. The input process dispatches a transaction process for each transaction request message received from the respective client process. Each transaction process oversees transaction execution and receives transaction output. A transaction process provides a transaction output message for the originating client process. In a non-sync'd mode of operation, transaction processes may synchronously send transaction output messages to client processes. In a synchronized mode of operation, one transaction process at a time sends output messages under control of an output process in the named processing object. The transaction message control mechanisms provide a bi-directional transaction message flow between server and client processes,” (abstract of Kuo).

FIFO queue usage with timestamps is very well known in the art at the time of the applicant's invention.

It is for these reasons that one of ordinary skill in the art at the time of the applicant's invention would have been motivated to order, in said control process... and deliver said messages... in the system as taught by Schwaller.

23. Claim 33 rejected under 35 U.S.C. 103(a) as being unpatentable over Schwaller in view of Kuo and Willmann as applied to claim 32, further in view of Official Notice.

Schwaller fails to teach: the combination of sorting by server order and time order; and the combination of delivering messages sorted by client order and time order.

Official notice is taken of the combination of sorting by server order and time order; and the combination of delivering messages sorted by client order and time order. Server order, client order, and time order are all taught in the combination of Schwaller, Kuo, and Willmann as applied to the rejection of claim 32. Sorting methods can easily be modified and combined for more efficient and selective distribution.

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to combine sorting by server order and time order; and to deliver messages sorted by client order and time order.

It is for these reasons that one of ordinary skill in the art at the time of the applicant's invention would have been motivated to combine sorting by server order and time order; and to deliver messages sorted by client order and time order in the system as taught by Schwaller.

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24. Claim 34 rejected under 35 U.S.C. 103(a) as being unpatentable over Schwaller as applied to claim 29, in view of Gee.

Schwaller teaches: stopping said servers upon each of said servers reaching said synchronization point (lines 36-45 of column 5).

Schwaller fails to teach: setting a plurality of synchronization points comprising elapsed time in the simulation of servers and clients. However, Gee discloses: "Either the start time of the response or the duration of the response may then iteratively be modified to cause the response to eventually overlap the hit window, thereby generating a correct response cue," (abstract).

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to set a plurality of synchronization points comprising elapsed time in the simulation of servers and clients. "Before calibration process 300 begins, the diagnostic/training software (such as OMDFF) may be initialized along with the data acquisition processor 106 of FIG. 2 to synchronize the progression of presenting the stimulus by the software and the mouse down signal durations generated by data acquisition computer/processor 104," (lines 55-61 of column 7 in Gee). It is for this reason that one of ordinary skill at the time of the applicant's invention would have been motivated to set a plurality of synchronization points comprising elapsed time in the simulation of servers and clients in the system as taught by Schwaller.

25. Claim 35 rejected under 35 U.S.C. 103(a) as being unpatentable over Schwaller in view of Gee as applied to claim 34.

Schwaller fails to teach: varying the duration of elapsed time between said synchronization points by way of said control process setting the duration of time to elapse between synchronization points. However, Gee discloses: "Either the start time of the response or the duration of the response may then iteratively be modified to cause the response to eventually overlap the hit window, thereby generating a correct response cue," (abstract).

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to vary the duration of elapsed time between said synchronization points by way of said control process setting the duration of time to elapse between synchronization points. "Before calibration process 300 begins, the diagnostic/training software (such as OMDFF) may be initialized along with the data acquisition processor 106 of FIG. 2 to synchronize the progression of presenting the stimulus by the software and the mouse down signal durations generated by data acquisition computer/processor 104," (lines 55-61 of column 7 in Gee). It is for this reason that one of ordinary skill at the time of the applicant's invention would have been motivated to vary the duration of elapsed time between said synchronization points by way of said control process setting the duration of time to elapse between synchronization points in the system as taught by Schwaller.

26. Claim 36 rejected under 35 U.S.C. 103(a) as being unpatentable over Schwaller in view of Gee as applied to claim 34, and further in view of Kuo, Willmann, and Official Notice.

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Schwaller teaches: determining the occurrence of a predetermined event..., maintaining, in said control process..., a list of the occurrence..., and communicating said predetermined events... (lines 34-65 of column 28, lines 27-60 of column 29, line 16 of column 27 through line 33 of column 28, and line 62 of column 33 through line 28 of column 34).

Schwaller fails to teach: setting a plurality of synchronization points...; ordering, in said control process...; and delivering messages... However, Gee discloses: : "Either the start time of the response or the duration of the response may then iteratively be modified to cause the response to eventually overlap the hit window, thereby generating a correct response cue," (abstract).

Kuo discloses: "The invention provides a mechanism that can be manipulated as an object by a client process to control bi-directional transaction message traffic between the client process and a server process. The invention allows a client process to name the mechanism as an object at a server process. The named object (also referred to as a 'Tpipe') includes the ability to receive transaction request messages and transaction output messages at the server process and to associate transaction output messages with their ultimate destinations. Thus, the association between transaction output and its recipient is not made by a server process but is, rather, left to the client process.

The invention is embodied in both a mechanism and a procedure for bi-directional transport of transaction messages between server and client processes.



The invention affords flexibility to a transaction processing system of the client/server model in that many transaction outputs may simultaneously flow through the same Tpipe.

The invention allows a client process to create more than one Tpipe, thereby allowing distinctions to be made between transactions that occur naturally because of, for example, flow-control and synchronization differences.

The invention relieves the server process of responsibility for coupling a transaction output to an end user.

The invention provides client processes with control over the output of their submitted transactions," (lines 21-48 of column 2); and "Transaction requests are passed to the transaction manager 31 through an input queue 35. The transaction manager evaluates a transaction request, dispatches a transaction process to execute the request via one of the applications 33, 34. Output for transaction requests is queued at 36 and passed through the communications interface 25 and the communications facility 16 to the respective requesting client processes," (lines 35-42 of column 3)

Willmann discloses: "Each of these data packets is provided with a time stamp TS, which gives information on the order of arrival of the data packets. The queues QU1 and QU2 are organized as FIFO queues (FIFO=first-in-first-out)," (lines 16-19 of column 4).

Official notice is taken of the combination of sorting by server order and time order; and the combination of delivering messages sorted by client order and time

order. Server order, client order, and time order are all taught in the combination of Schwaller, Kuo, and Willmann as applied to the rejection of claim 32. Sorting methods can easily be modified and combined for more efficient and selective distribution.

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to set a plurality of synchronization points comprising elapsed time in the simulation of servers and clients. "Before calibration process 300 begins, the diagnostic/training software (such as OMDFF) may be initialized along with the data acquisition processor 106 of FIG. 2 to synchronize the progression of presenting the stimulus by the software and the mouse down signal durations generated by data acquisition computer/processor 104," (lines 55-61 of column 7 in Gee). It is for this reason that one of ordinary skill at the time of the applicant's invention would have been motivated to set a plurality of synchronization points comprising elapsed time in the simulation of servers and clients in the system as taught by Schwaller.

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to order, in said control process... and deliver said messages... "Each transaction message control mechanism includes a named processing object that includes a name identifying the object. The named processing object also includes an input process that receives all transaction request messages naming the object and identifying the originating client process. The input process dispatches a transaction process for each transaction request message received from the respective client process. Each transaction process oversees transaction execution and receives transaction output. A transaction process provides a transaction output message for the

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originating client process. In a non-sync'd mode of operation, transaction processes may synchronously send transaction output messages to client processes. In a synchronized mode of operation, one transaction process at a time sends output messages under control of an output process in the named processing object. The transaction message control mechanisms provide a bi-directional transaction message flow between server and client processes," (abstract of Kuo).

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to combine sorting by server order and time order; and to deliver messages sorted by client order and time order.

It is for these reasons that one of ordinary skill in the art at the time of the applicant's invention would have been motivated to combine sorting by server order and time order; and to deliver messages sorted by client order and time order in the system as taught by Schwaller.

27. Claim 37 rejected under 35 U.S.C. 103(a) as being unpatentable over Schwaller in view of Gee, Kuo, Willmann, and Official Notice as applied to claim 36, further in view of Wegrzyn.

Schwaller fails to teach: determining through said control process whether client/server applications...; said control process acknowledging...; and said simulation terminating...

However, Wegrzyn discloses: "messages are scheduled using a temporary data structure--namely the combined messages/scheduling data block 68. The combined

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messages/scheduling data block 68 temporarily holds messages until the end of each scheduler processing cycle,” (line 66 of column 14 through line 3 of column 15).

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to have each client process sends a finish message; control process holds said finish messages; and control process sends a finish message... “The combined messages/scheduling data block 68 temporarily holds messages until the end of each scheduler processing cycle when the messages are ready to be formatted by frame formatter 70,” (lines 1-5 of column 15 in Wegrzyn). It is for this reason that one of ordinary skill in the art at the time of the applicant's invention would have been motivated to have each client process sends a finish message; control process holds said finish messages; and control process sends a finish message in the system as taught by Schwaller.

28. Claim 40 rejected under 35 U.S.C. 103(a) as being unpatentable over Schwaller in view of Baker.

Schwaller teaches: said server means evaluates...; said server means sends an event expression...; and a plurality of said server means and said client means... (line 29 of column 1 through line 21 of column 3, and Fig. 1, 3, and 4).

Schwaller fails to teach: event expression message containing a timestamp. However, Baker discloses: “A client session's time stamp is updated each time a message transaction containing the session id for the session is received,” (lines 13-15 of column 17).

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It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to have the event expression message contain a time stamp. "If the time stamp value shows that a session has aged, the session entry for the aged session is cleared from the session table 660," (lines 23-35 of column 17 in Baker). It is for this reason that one of ordinary skill in the art at the time of the applicant's invention would have been motivated to have the event expression message contain a time stamp in the system as taught by Schwaller.

### ***Conclusion***

29. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Dobbelstein (U.S. 5,881,269) discloses simulation of multiple local area network clients on a single workstation.

Stilwell et al. (U.S. 5,907,696) discloses a network device simulator.

Weinberg et al. (U.S. 5,974,572) discloses software system and method for generating a load test using a server access log.

Ramanathan et al. (U.S. 6,041,041) discloses method and system for managing data service systems.

Straathof et al. (U.S. 6,167,534) discloses load test system and method with client/server system.

Eckes et al. (U.S. 6,243,832 B1) discloses network access server testing system and methodology.

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Rowe (U.S. 6,324,492 B1) discloses server stress testing using multiple concurrent client simulation.

Conti et al. (U.S. 6,522,995 B1) discloses method and apparatus for web-based control of a web-based workload simulation.

Or et al. (U.S. 6,532,237 B1) discloses apparatus for and method of testing a hierarchical PNNI based ATM network.

Landan (U.S. 6,564,342 B2) discloses post-deployment monitoring of server performance.

Myers (U.S. 6,601,020 B1) discloses system load testing coordination over a network.

Malmskog et al. (U.S. 6,721,686 B2) discloses server load testing and measurement system.

Kessner (U.S. 6,754,701 B1) discloses use of a single thread to support multiple network connections for server load testing.

La Cascia, Jr. et al. (U.S. 6,772,107 B1) discloses system and method for simulating activity on a computer network.


30. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Meucci at (703) 305-1382, or at (571) 272-3899 after October 26<sup>th</sup>, 2004. The examiner can normally be reached on Monday-Friday from 8:30 AM to 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jack Harvey, can be reached at (703) 305-9705, or at (571) 272-3896 after October 26<sup>th</sup>, 2004. The fax phone number for this Group is (703) 308-5358.

Communications via Internet e-mail regarding this application, other than those under 35 U.S.C. 132 or which otherwise require a signature, may be used by the applicant and should be addressed to [michael.meucci@uspto.gov].

All Internet e-mail communications will be made of record in the application file. PTO employees do not engage in Internet communications where there exists a possibility that sensitive information could be identified or exchanged unless the record includes a properly signed express waiver of the confidentiality requirements of 35 U.S.C. 122. This is more clearly set forth in the Interim Internet Usage Policy published in the Official Gazette of the Patent and Trademark on February 25, 1997 at 1195 OG 89.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to Group receptionist whose telephone number is (703) 305-3900.

  
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